In the claims:

~~Claims~~ What Is Claimed Is:

1. (original) Apparatus for monitoring the condition of a storage battery comprising first and second connection conductors each for connection to a respective output terminal of the battery, switching means connected in series with a resistance between the connection conductors and voltage measurement means connected in parallel with the resistance, in which the switching means operates to complete the circuit to allow current to flow between the battery terminals, and voltage measurement means being operative to measure the potential across the resistance during such current flow, the period during which the switching means is closed and the frequency of such closures being such that the power dissipated by the apparatus averaged over several closures being substantially less than the instantaneous power delivered by the battery and in which the current drawn during each closure is of the same order as the short-circuit current of the battery.

2. (original) Apparatus according to claim 1 in which the switching means includes a solid-state switching device.

3. (original) Apparatus according to claim 2 in which the gate of the solid-state switching device is controlled by an output of a microcontroller.

4. (currently amended) Apparatus according to ~~any preceding~~ claim 1 in which the solid-state switching device is a MOSFET.

5. (currently amended) Apparatus according to ~~any one of claims 1 to 3~~ claim 1 in which the solid-state switching device is a bipolar transistor.

6. (currently amended) Apparatus according to ~~any preceding~~ claim 1 that comprises an amplifier to amplify the voltage that appears across the resistance.

7. (currently amended) Apparatus according to ~~any preceding~~ claim 1 comprising an analogue-to-digital converter to measure the voltage that appears across the resistance.

8. (currently amended) Apparatus according to ~~any preceding~~ claim 1 in which the duration of each closure has an order of magnitude of 10^{-5} seconds.

9. (currently amended) Apparatus according to ~~any preceding~~ claim 1 in which the resistance is of order $10^{-3}\Omega$ ohms.

10. (currently amended) Apparatus according to ~~any preceding~~ claim 1 further comprising indicating means operative to indicate the state of a battery to which the apparatus is connected.

11. (original) Apparatus according to claim 10 in which the indicating means comprises indicators that can display lights of one of several alternative colours, the particular colour that is being displayed being indicative of the state of the battery.

12. (currently amended) Apparatus according to claim 10 ~~or claim 11~~ in which the indicating means includes a display device that can display one or more alphanumeric characters or one or more icons, the display being representative of the state of the battery.

13. (currently amended) Apparatus according to ~~any preceding~~ claim 1 further comprising interface means operative to communicate the state of the battery to external apparatus.

14. (original) Apparatus according to claim 13 in which the external apparatus is an electronic control bus of a vehicle.

15. (currently amended) Apparatus according to ~~any preceding~~ claim 1 including communications means for conveying the state of a battery to a remote location.

16. (original) Apparatus according to claim 15 in which the communication means operates using wireless telecommunication, either as a radio link or cellular telephony.

17. (currently amended) Apparatus according to ~~any one of claims 1 to 16~~ claim 1 further including means for monitoring the output of a charging device for the battery and for issuing a warning in the event of its whole or partial failure.

18. (original) Apparatus according to claim 17 which monitors the characteristic output of the charger over time and issues a warning in the event that this suggests whole or partial failure of the charging means.

19. (currently amended) Apparatus according to ~~any preceding~~ claim 1 being programmed to enter a sleep mode in which testing is suspended in the event that the battery EMF remains substantially constant for a predetermined period.

20. (currently amended) A lead-acid storage battery comprising apparatus for monitoring the condition of a storage battery according to ~~any preceding~~ claim 1.

21. (canceled)

22. (original) A storage battery ~~(1)~~ having detection and indicating means integrally assembled on it, comprising: a casing ~~(2)~~ having an upper portion ~~(4)~~ and a lower portion ~~(5)~~, at least a cell defined within the casing ~~(2)~~; a cover ~~(3)~~ enclosing the upper portion ~~(4)~~ of the casing ~~(2)~~; a pair of terminals ~~(6)~~ mounted on the cover, each terminal is electrically connected to the corresponding anode and cathode of the cell; characterised in that, the detection and indicating means includes apparatus for monitoring the condition of a storage battery comprising first and second connection conductors each for connection to a respective output terminal of the battery, switching means connected in series with a resistance between the connection conductors and voltage measurement means connected in parallel with the resistance, in which the switching means operates to complete the circuit to allow current to flow between the battery terminals, and voltage measurement means being operative to measure the potential across the resistance during such current flow, the period during which the switching means is closed and the frequency of such closures being such that the power dissipated by the apparatus averaged over several closures being substantially less than the instantaneous power delivered by the battery and in which the current drawn during each closure is of the same order as the short-circuit current of the battery~~an electronic circuit, the electronic circuit being adapted to measure the internal resistance of the storage battery and the electromotive force between the pair of terminals (6) and compare the measured electromotive force with a~~

~~pre-determined value set in the electronic circuit and calculate the current, whereby the calculated current correspondingly indicates the expected remaining life span of the storage battery and the measured electromotive force indicates the condition of the storage battery based on the preset value on a display means (9).~~

23. (currently amended) ~~A storage battery according to claim 8, further characterised in that the current is calculated using a preset voltage associated with the storage battery.A storage battery according to claim 8 or claim 9, further characterised in that the electronic circuit is also adapted to compare the measured electromotive force to the predetermined value thereby indicating the condition of a charging system where the battery is connected.A storage battery according to claim 10, further characterised in that the electronic circuit is adapted to process the measured electromotive force and the internal resistance of the battery and on the display means (9), indicate at least, whether the battery is in good working condition or, the battery is not in good working condition or, whether the battery is being charged sufficiently by the charging system.A storage battery according to claim 11, further characterised in that the electronic circuit includes use of a microcontroller (15) to process the measured electromotive force and the internal resistance of the storage battery.A storage battery according to claim 12, further characterised in that the electronic circuit also includes use of a regulated power source (11), a reference voltage and impedance (12), an analogue to digital converter (13), a clock signal generator (14), a decoder (16) and the display means (9).~~ A storage battery according to ~~any~~ preceding ~~one of claims 20 to 22~~ claim 21 22 further characterised in that the electronic circuit further includes a communication means ~~(17)~~ to transmit the processed signal to other display means remotely position from the storage battery.

24. (original) A storage battery according to claim ~~1~~ 4 23 further characterised in that the display means ~~(9)~~ includes a light emitting diode or a liquid crystal display device.

25. (original) A storage battery according to claim ~~2~~1~~5~~3, further characterised in that the display means is mounted flush with the cover ~~(3)~~.

26. (currently amended) A storage battery according to ~~claims 2~~1~~52 or 2~~1~~63~~ claim 24 further characterised in that the display means ~~(9)~~ includes a segmented display device for exhibiting a measured value.

27. (currently amended) A storage battery according to ~~any one of claims 1~~5~~20 to 1~~2~~76~~ claim 2~~2~~4~~ in which the display device is capable of displaying one or more icons to indicate the state of the battery.

28. (currently amended) A storage battery according to ~~any one of claims 20 to 2A storage battery according to any preceding claim,7~~ claim 2~~2~~4~~ further characterised in that the electronic circuit is assembled and embedded within the cover ~~(3), A storage battery according to any preceding claim, further characterised in that a handle (7) is pivotally mounted and positioned substantially at the centre of the cover (3) for assisting lifting of the battery. A storage battery according to claim 20 in which the handle is collapsible.~~

29. (currently amended) A storage battery according to ~~any one of claims 20 to 2A storage battery according to any preceding claim.6~~ claim 2~~2~~4~~ further characterised in that the storage battery ~~for~~is used in a motor vehicle, and the display means is adapted to indicate the condition of the battery during the engine off and indicate the condition of the charging system of the motor vehicle when the engine is in operation.

30. (currently amended) A storage battery according to ~~any one of claims 20 to 2A storage battery according to any preceding claim9~~ claim 2~~2~~4~~ further characterised in that the electronic circuit ~~also~~ is capable of detecting leakage of energy from the battery and indicating the same on the display means while the engine is not running.

31. (currently amended) A storage battery according to ~~any one of claims 20 to 30~~ claim 2~~2~~4~~ in which the detection and indicating means measures the total potential across all cells of the battery and the internal resistance of the storage battery.

32. (currently amended) A storage battery according to ~~any one of claims 20 to 31~~ claim 22~~1~~ including communication means for conveying the state of the battery to apparatus external of the battery.

33. (original) A storage battery according to claim 32 in which the apparatus external to the battery is a control bus of a vehicle.

34. (currently amended) A storage battery according to claim 32 ~~or claim 33~~ in which the apparatus external to the battery includes communication means for communicating the state of the battery to a remote location.

35. (canceled)

36. (canceled)